Family Structure, Family Structure Transitions, and Childhood Food Insecurity

Approximately 20% of households with children in the US are food insecure, defined by the Department of Agriculture as, "having limited access to adequate food due to lack of money and other resources." While adults in food insecure households may shield children from feeling the effects of insecurity, 10% of all households with children still report food insecurity among children [1]. The negative effects of food insecurity on children's physical, psychological, and developmental well-being have been well documented. Children in female-headed households are much more likely to experience food insecurity than those living in households with two married parents (18.7% vs. 6.3) [1]. Today, half of children will spend some time in a single-parent family [2]. In addition, many children will live with unmarried biological parents or with a biological parent and that parent's new partner. Research points to substantial variation in parental investments and children's economic security and well-being across these different types of living arrangements [3]. More recent research suggests that child well-being is affected not only by the type of family structure in which children live, but also by transitions across these different living arrangements [3]. In this paper, we examine the associations of family structure and transitions in family structure with children's food insecurity, using representative panel data.

Determinants of Food Insecurity - Material resources to which a household has access such as education, household size, household income, assets, homeownership, and access to credit, are some of the most important predictors of food insecurity [4]. Also, factors related to resource stability, such as unemployment, income volatility, and other negative income shocks, over and above the absolute level of resources, are also determinants [5]. Last, the ability to manage resources, regardless of their level or stability, is also an important determinant of food insecurity [6]. Markers of coping and resource management, including depression, physical health, experience of domestic violence, perceived stress, anxiety, self-esteem, mastery, and cognitive skills are all associated with food insecurity [7].

Links Between Family Structure, Family Structure Transitions and Food Insecurity - Children living with two married biological parents on average have access to the highest level of material resources because of the presence of two adults who can both work or trade-off work and childcare and because of positively selected characteristics of those who choose to marry and stay together; those living with a single mother have access to the least, and children in other family forms fall somewhere in between [8]. Economic well-being of families with two cohabiting parents is on average lower than for married parents because of underlying characteristics associated with selection into cohabitation (instead of marriage), and because cohabiting relationships are generally less stable [9]. Children in repartnered families (biological parent with a new partner), may have fewer resources than those in two biological parent families because social parents tend to invest less in their non-biological children [10]. However, resources among remarried social parent families tend to resemble intact biological families, while resources among those who are cohabiting tend to resemble single-mother families [8].

Parents' ability to manage resources may differ across family structure states to the degree that parents with more positive characteristics (health, mental health, cognitive skills) select into marriage and other more advantaged family structures and to the degree that family structure may actually cause mental health outcomes [11].

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Family structure transitions often change access to material resources in the household. Negative income shocks, which may accompany transitions from partnered to single-parent families, and the associated instability of material resources are associated with higher food insecurity [12]. In addition, family structure transitions may decrease parents' ability to cope and manage resources [13]. This may be particularly true for relationship dissolutions (transitions from partnered to single-parent family states). However, the dissolution of relationships that were violent, stressful, or conflict-ridden, while still having the potential to decrease resources, may improve parental mental health and the ability to manage resources. Also, children living with stably single parents, while having on average lower resources, may be less likely to experience food insecurity than children whose mothers transition into partnered family structures, as these types of transitions can also produce stress and anxiety, lowering mothers' ability to manage resources.

Only a few of studies have examined family structure and food insecurity. Two studies examined family structure and material hardship (a broader measure that includes one indicator of food insecurity), and found that single-mother households were more likely to experience material hardship than married two-parent families, controlling for various socio-demographic characteristics[14,15]. However, these studies did not distinguish between biological and social parents, did not explicitly examine food insecurity, and are based on data now over 20 years old. A recent study examined relationship transitions and material hardship and found that transitions to marriage or cohabitation with either the biological father or a new partner were associated with fewer hardships, while transitions out of relationships were associated with more hardship [16]. Only one study looked at family structure transitions and food insecurity, and found lower household food insecurity among mothers who transitioned into a union, but little evidence of increased food insecurity associated with union dissolution. However, this study did not examine child food insecurity or the types of family structures mothers were exiting or entering [17].

Current Study - Our study contributes to this prior literature in a number of ways. First, we use longitudinal data, which allows us to implement models to help account for selection into family structure and transitions. Second, we examine the impact of family structure states and family structure transitions on child food insecurity, a more extreme and salient outcome for child well-being than general household insecurity. Finally, in pooled models, we distinguish among three different types of families: (1) those who are in consistent family structures across the entire panel; (2) those who experience transitions between a given pair of waves; and, (3) those who remain in the same family state for two consecutive waves, but who did or will experience a transition at some other point in the panel. This grouping allows us to investigate the impacts of specific family structure changes on food insecurity while identifying families who appear stable (for two consecutive waves) but may differ from those who were stable across all waves.

Data & Measures - We used data from the Early Childhood Longitudinal Study – Kindergarten Cohort, a representative panel of children entering kindergarten in 1998-1999 and followed-up in 1st, 3rd, 5th, and 8th grades. Child low and very low food security, our primary outcomes, were assessed using the USDA's 8-item Child Food Security Scale at 3rd, 5th, and 8th grades. Analyses were based on 6,090 families who provided relevant information at every survey wave from 1st to 8th grades. At each wave, we coded families as having one of four states: (1) two biological parents of the focal child (married or cohabiting); (2) a single biological mother; (3) a biological mother and a social father; or (4), a family not including focal child's biological mother.

In initial models, which used food insecurity at 8th grade as an outcome, we included two transition variables, one that indicated whether families experienced any transition over the entire period and another for the number of transitions experienced. Families with no transitions were coded to the four-category variable for family structure described above. For more complex models, which pooled observations across waves for each family, we created indicators of transition or stability between each possible pair of survey waves. Families with transitions between waves were coded as having a specific constant family structure between a pair of waves or experiencing a transition. We coded transitions that might be of greatest salience for food insecurity: (1) moving from a two biological parent household to a single mother household; (2) moving from a mother and social father household to a single mother household; (3) moving from a single mother household into any other structure; and (4) all other transitions. As before, families with no transitions were coded to one of the four constant family structures.

Results - In initial models examining food insecurity at 8th grade and controlling for food insecurity in kindergarten, we found that families who experienced any transition had a significantly higher probability of child food insecurity (0.024), and that each additional transition was also associated with increases in child food insecurity. However, in models that included the number of transitions and expanded the 'no transition' group to include indicators for specific constant family structures, the number of transitions was no longer significant. Instead, among those with no transitions, families with both biological parents, with biological mothers and social fathers, and those where children did not live with their biological mother had significantly lower probabilities of child food security when compared to single mother families.

In pooled lagged dependent variable analyses that included indicators for consistent family structure across the panel but also indicators of between wave stability and transition, both structure and transitions were significantly associated with food insecurity. These models indicated that other stable family structures were associated with lower probabilities of low and very low child food security when compared to stable single mother families. Also, relative to consistent single mother families, families that transitioned from biological mother and social father families to single mother families had significantly lower rates of very low food security as did those who transitioned out of single mother families into any other family type.

Overall, our results suggest a relationship between family structure, family structure transitions, and child food insecurity that is more complex than previously understood. Our full paper explores the implications of these results as well as possible future directions for research.

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